Cloud-Based Social Media Visual Analytics Disaster Response System, Phase I

Completed Technology Project (2013 - 2013)

Project Introduction

We propose a next-generation cloud-based social media visual analytics disaster response system that will enable decision-makers and first-responders to obtain real-time analytics (both descriptive and predictive) for situational awareness and early-warning. Social media sites like Twitter and Facebook provide rapid "sensory" feedback from "human sensors" – the millions of people on the ground including those affected by the disaster as well as hundreds of first-responders and relief organizations. The problem is that this social media data can be overwhelming and noisy (lots of irrelevant stuff). Our proposed innovation is to combine and analyze this social media unstructured "big-data", together with other structured data from a variety of sources including NASA. The emphasis is on visual analytics which will allow all these diverse geospatial data to be integrated and analyzed on a real-time basis in an intuitive manner. We utilize geobrowsers such as COAST, Google Earth, and OpenStreetMap for display of the output of the visual analytics prediction system. This is an interactive system which enables the relevant users and decision-makers to provide input to the analytics process as the solution evolves.

Primary U.S. Work Locations and Key Partners
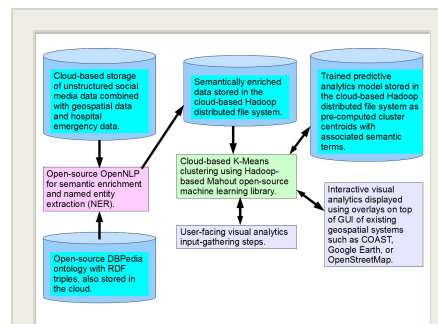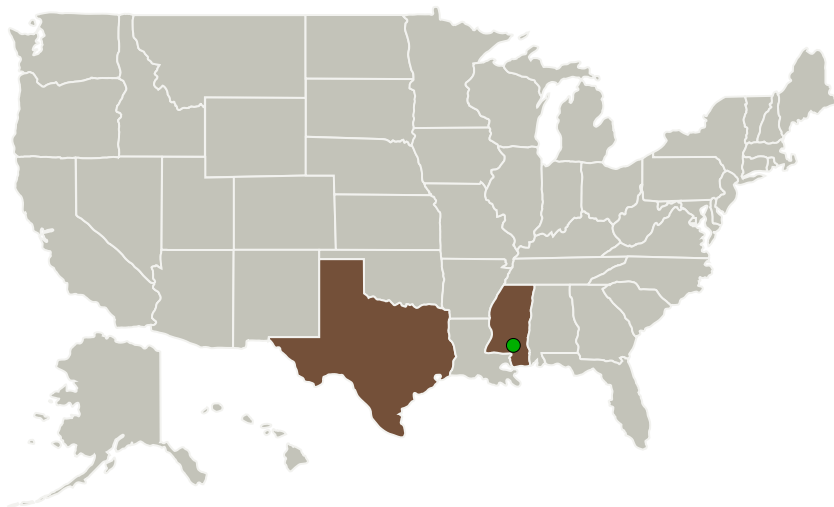
Cloud-Based Social Media Visual Analytics Disaster Response System

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Completed Technology Project (2013 - 2013)

Organizations Performing Work	Role	Type	Location
Vcrsoft, LLC	Lead Organization	Industry Minority-Owned Business	Arlington, Texas
●Stennis Space Center(SSC)	Supporting Organization	NASA Center	Stennis Space Center, Mississippi

Primary U.S. Work Locations	
Mississippi	Texas

Project Transitions

▶ **May 2013:** Project Start

✓ **November 2013:** Closed out

Closeout Documentation:
- Final Summary Chart*(https://techport.nasa.gov/file/138038)*
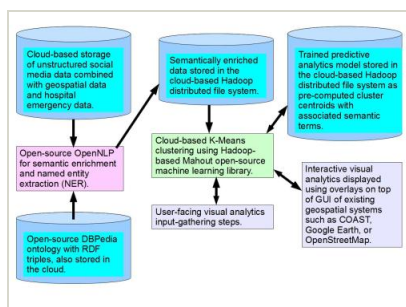
Images

Project Image
Cloud-Based Social Media Visual Analytics Disaster Response System
(https://techport.nasa.gov/image/132430)

Organizational Responsibility

Responsible Mission Directorate:
Space Technology Mission Directorate (STMD)

Lead Organization:
Vcrsoft, LLC

Responsible Program:
Small Business Innovation Research/Small Business Tech Transfer

Project Management

Program Director:
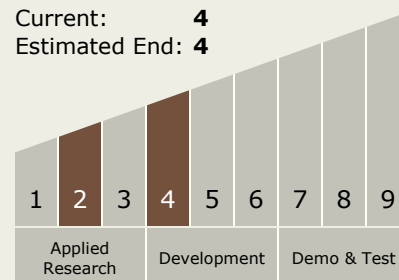Jason L Kessler

Program Manager:
Carlos Torrez

Principal Investigator:
Vc Ramesh

Technology Maturity (TRL)

Start: **2**
Current: **4**
Estimated End: **4**

1	2	3	4	5	6	7	8	9
Applied Research			Development			Demo & Test		

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Technology Areas

Primary:

- TX11 Software, Modeling, Simulation, and Information Processing
  └ TX11.4 Information Processing
    └ TX11.4.4 Collaborative Science and Engineering

Target Destinations

The Moon, Mars, Outside the Solar System, The Sun, Earth, Others Inside the Solar System

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